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**Dan Anderson\*** (dan-anderson@uiowa.edu), Department of Mathematics, The University of Iowa, Iowa City, IA 52242, and **Jason Juett**. *Length functions for factorization in commutative rings.*

Let  $R$  be a commutative ring, not necessarily an integral domain. We investigate several functions which measure the length of factorizations of an element of  $R$ ; namely, maximal length, minimal length (of an atomic factorization), ordinal-valued length, and minimal (resp., maximal) length of the essential part of a U-decomposition (resp, U-factorization). We also consider the corresponding elasticities. (Received July 07, 2014)